DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING and COMPLIANCE DIVISION
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES)

Statement of Basis

Permittee:	Luzenac America, Inc. (LAI)
Permit No.:	MT0028584
Receiving Water:	Johnny Gulch and Unnamed Irrigation Ditch
Facility Information:	Luzenac America Yellowstone Mine
Mailing Address:	P.O. Box 130 Cameron, MT 59720
Contact:	Ben Scholz, Mine Manager
Telephone:	(406) 682-4882

Fee Information:

Number of Outfalls:	3
Outfall - Type:	001 – Surface Water and Mine Pit Water 002 – Surface Water 003 – Surface Water

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I. Permit Status

LAI Yellowstone Mine (permittee) currently has a current Montana Pollutant Discharge Elimination System (MPDES) permit MT0028584, issued July 1, 2006, to discharge mine dewatering wastewater and surface water runoff to Johnny Gulch, which ultimately discharges to Cherry Gulch via Ruby Creek Irrigation Ditch.

The current MPDES permit compliance schedule required the permittee to construct an additional in-drainage stormwater treatment pond, referenced in the current permit as Pond 6A, by December 31, 2007. The objective was to provide sufficient sedimentation pond storage capacity to handle runoff from a 10 year, 24-hour rainfall event (1.9 inches of rain per 24-hour period) at the mine site and Johnny Gulch drainage area above Outfall 002 without causing a discharge from Outfall 002.

Permittee did not complete construction of Pond 6A as required and was issued a violation letter on January 15, 2008, by the Department of Environmental Quality (Department). The violation letter required the permittee to either complete Pond 6A as required or submit to the Department, by no later than February 28, 2008, an updated application for a permit modification to substitute Pond 9A for Pond 6A.

On February 27, 2008, the Department received an application for permit modification from the permittee requesting; 1) to be allowed to substitute their gravel pit, Pond 9A, for Pond 6A, which would increase storage capacity; and 2) to move Outfall 002 from its current location at the Pond 8A overflow structure to a point approximately 2,000 feet north and east at the overflow structure from Pond 9A. In response to Department comments and to preserve operational flexibility, the permittee amended its application to maintain Outfall 002 as it is currently defined and to add Outfall 003, from Pond 9A.

Permittee certified that sufficient storm water storage capacity exists with substitution of Pond 9A for Pond 6A in the series of sedimentation ponds, such that no discharge will occur from either Outfall 002 or Outfall 003 as a result of a rainfall event of 1.9 inches or less in a 24-hour period, or the equivalent snowmelt. Permittee indicates that should a discharge occur, it would occur from either Outfall 002 or Outfall 003, but not from both.

On June 16, 2008, a representative of the Department conducted a compliance inspection at the mine site and found no permit violations in the areas evaluated. The permittee was required to submit a written plan for how discharges at Outfall 002 and Outfall 003 would be measured. During the inspection, mine personnel reported that a rainfall event on May 21-22, 2008, at the mine site resulted in 3.9 inches of rain in 26 hours, which significantly exceeded the 10-year, 24-hour precipitation event, but that no discharge occurred from Outfall 002 or Outfall 003.

As required by ARM 17.30.1365(4)(b), the scope of this permit modification is limited to; 1) addition of Outfall 003 at location (45˚05’19”N latitude, 111˚42’00”W longitude); and 2) use of Pond 9A as part of the stormwater retention/treatment system in lieu of construction of Pond 6A as required by compliance schedule in the current permit.

Other Department permits currently in effect at the site include Montana Metal Mine Reclamation Act Operating Permit 00005.

II. Facility Information

The LAI Yellowstone Mine is an open-pit talc mining and sorting operation located within Sections 3,4 and 9, T9S, R1W and Section 34, T8S, R1W, Madison County, Montana. The mine is located within Johnny Gulch drainage of the Gravelly Mountain Range approximately 10 miles south of Cameron. The mine began operation in the 1940s and has been operating continuously since 1951 utilizing conventional hard rock mining methods. Accordingly, the facility is not a “new discharger” (17.30.1304(36)).

The current MPDES permit authorizes Outfalls 001 and 002. Outfall 001 receives mine dewatering wastewater from the bottom of the pit. The water is collected in a sump area in the pit and, if necessary, pumped over the south pit-wall of the South 40 pit, to a sedimentation pond, named Pond 1A. Pond 1A overflows to Pond 2A, in the bottom of Johnny Gulch, where it mixes with Johnny Gulch base flows as existing Outfall 001. No discharge from Outfall 001 has been reported since 1994.

From Pond 2A, water infiltrates the rock drain under the waste rock dump called the Johnny Gulch Overburden pile, which has been placed in the drainage and reclaimed. The commingled pit dewatering wastewater and Johnny Gulch base flow water continue to flow down the rock drain along the pre-mining drainage under the un-reclaimed South Overburden pile and the East Overburden pile. The flow from the rock drain emerges within the lower Johnny Gulch drainage, approximately 5,150 feet northeast of Pond 2A along the eastern border of the East Overburden pile. Drainage from the rock drain continues down Johnny Gulch and commingles with storm water runoff from the mine road and runoff from waste rock piles and the crude ore load-out facility. The waste stream receives primary treatment as it passes through sedimentation Ponds 3A, 4A, 5A, 7A and then is diverted to Pond 8A and/or Pond 9A for final treatment. Pond 9A is the mine gravel pit and is used in lieu of Pond 6A, which was required by the current permit compliance schedule but was not constructed.

Pond 8A discharges to the Ruby Creek Irrigation Ditch (RCID) system through existing Outfall 002. The discharge flows to an existing irrigation network impoundment named Pond 10A. Pond 10A is an irrigation impoundment which feeds into irrigation ditches and ultimately to Cherry Gulch which drains to the Madison River some four miles from the mine site. The relative location of the mine property, outfalls and receiving waters is shown on OUTALL LOCATION MAP on page 7.

Permittee has constructed a ditch from Pond 7A to Pond 9A, the mine gravel pit. A berm has been constructed around the upper edges of Pond 9A to increase storage capacity. The discharge from Pond 9A is proposed Outfall 003 and it will drain into the RCID system some 2,000 feet downstream from Outfall 002.

a. Effluent Characteristics

Outfall 001

Outfall 001 will not be addressed because it is not part of the modification.[ARM 17.30.1365(4)(b)]

Outfalls 002 and 003

Sources of wastewater to Outfalls 002 and 003 include the combined flows of Outfall 001, base flow emanating from the rock drain (which is impacted by flows in Johnny Gulch above Pond 1A, if any), mine drainage from waste rock piles, mine drainage from the crude ore loadout, snow melt and storm water runoff from the mine roads and other disturbed areas and from undisturbed areas.

Hydrologic studies commissioned by permittee in 1997 determined that the peak flow resulting from a 10 year, 24 hour rainfall event (1.9 inches) in upper Johnny Gulch would be approximately 55 cubic feet per second (cfs). Such flow would run head on into the rock drain, located below Pond 2A. Considering infiltration and storage, the 10 year, 24 hour rainfall event is predicted to result in approximately 35.9 acre-feet of runoff to lower Johnny Gulch (Luzenac/Camp, Dresser & McKee/Maxim Technologies). The capacity of lower Johnny Gulch sedimentation Ponds 3A, 4A, 5A & 5B, 7A and 9A, is reported by the permittee as 36.08 acre-feet. Pond 8A adds another 1.98 acre-feet. of capacity. Accounting for infiltration, the effective capacity of the lower Johnny Gulch sedimentation ponds increases to 55.75 acre-feet (Luzenac), not including Pond 8A. Given the effective capacity of the lower Johnny Gulch sedimentation ponds, it appears that runoff from even a 25 year, 24 hour rainfall event (2.1 inches), estimated at 47.5 acre-feet, would be retained without discharge (Luzenac,Maxim Technologies).

Although no discharge is allowed from Outfalls 002 and 003, except from rainfall events exceeding 1.9 inches in 24 hours, the following summary is an estimate of effluent quality should a discharge occur. Permittee indicates that the pond system will be operated such that if a discharge is necessary, the discharge would be from either Outfall 002 or Outfall 003, not both simultaneously. Permittee estimates that if a discharge does occur because of precipitation that exceeds the 10 year, 24 hour event, the flow could be 0.300 million gallons per day (mgd).

Parameter (mg/L unless noted)	Average	Number of Samples	Minimum Value	Maximum Value
Biochemical Oxygen Demand	<6	1	<6	<6
Chemical Oxygen Demand	10	1	10	10
Total Organic Carbon	<0.5	1	<0.5	<0.5
pH, s.u.	8.0	4	6.5	10.2
Temperature, ˚C	10.5	2	6	15
Total Suspended Solids	349	3	22	966
Total Dissolved Solids	160	1	160	160
Oil and Grease	<1	1	<1	<1
Nitrate + Nitrite, as N	3.28	3	2.30	4.07
Ammonia, as N	<0.01		<0.01	<0.01
Total Organic Nitrogen, as N	0.7	1	0.7	0.7
Sodium	19	1	19	19
Calcium	33	1	33	33
Magnesium	46	1	46	46
Sodium Adsorption Ratio	0.51	1	0.51	0.51
Hardness, as $CaCO_3$	272	1	272	272
Zinc	0.04	1	0.04	0.04

III. Technology-based Effluent Limitations (TBELs)

Outfall 002

Discharge from Outfall 002 results only from precipitation events or snowmelt which exceed the capacity of the storm water management system. Because of the intermittent and precipitation-driven nature of this discharge, the Department determined that numeric TBELs were not feasible and none exist in the current permit [March 2006 Fact Sheet].

The requested permit modification adds Outfall 003, which will have the same discharge conditions and limitations as does Outfall 002 in the current permit. The requested permit modification will not affect TBELs.

IV. Water Quality-based Effluent Limitations (WQBELs)

Outfall 002

The current permit implements the following WQBELs:

- There shall be no discharge from this outfall except as a result of a precipitation event in excess of 1.9 inches in a 24 hour period or the equivalent snow melt.
- There shall be no discharge which causes a visible oil sheen in the receiving water or concentrations of oil and grease at in excess of 10 mg/L in the discharge.
- The permittee shall develop and implement a storm water pollution prevention plan (SWPPP) in accordance with Part I of the permit.

The requested permit modification adds Outfall 003 which will have the same discharge conditions and limitations as does Outfall 002 in the current permit. Outfall 003 is not considered a new source by the Department. Discharges from Outfall 003 will not cause significant changes in existing water quality [ARM 17.30.702(18)(d)] and [ARM 17.30.715(3)]. The Department's decision is based on (1) the facility water management plan is designed to be non-discharging for precipitation events equal to or less than a 10 year, 24 hour storm event and (2) a SWPPP has been developed in accordance with the current permit requirements. The requested permit modification will not affect WQBELs.

Nearly instantaneous mixing is assumed for Outfall 003 discharges in accordance with [ARM 17-30-516(3)(d)], resulting in effluent limitations applying at the point of discharge. Neither Johnny Gulch, Cherry Gulch nor the Madison River are included on the 1996 or 2006 303(d) list of water bodies in need of total maximum daily load (TMDL).

On September 21, 2000, a U.S. District Judge issued an order stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment (WQLS), the State is not to issue any new permits or increases under the MPDES program. The order was issued in the Friends of the Wild Swan v. U.S. EPA, *et. al.* (CV 97-35-M-DWM), District of Montana and Missoula Division. The Department finds that issuance of this permit modification does not conflict with Judge Molloy's

Order (CV 97-35-M-DWM) because the receiving waters are not listed on any of the 303(d) lists as being WQLS.

V. Final Effluent Limitations

Effluent limitations developed in the permit issued May 9, 2006 for Outfalls 001 and 002 will remain fully effective and enforceable and are unaffected by the requested permit modification. New limitations for Outfall 003 are identical to requirements for Outfall 002 in the current permit.

VI. Self-Monitoring Requirements

Self monitoring and reporting requirements for Outfalls 001 and 002 will remain as developed in the current permit issued May 9, 2006 and are unaffected by the requested permit modification. Effluent monitoring and reporting requirements for Outfall 003 in the modified permit will be identical to the requirements for Outfall 002 in the current permit.

VII. Compliance Schedules

The following statement will be added to Section I(E) of the permit.

"The permittee is allowed to substitute Pond 9A, with a total volume of 16.9 acre-feet, for proposed Pond 6A in the water management system."

VIII. All Other Permit Conditions

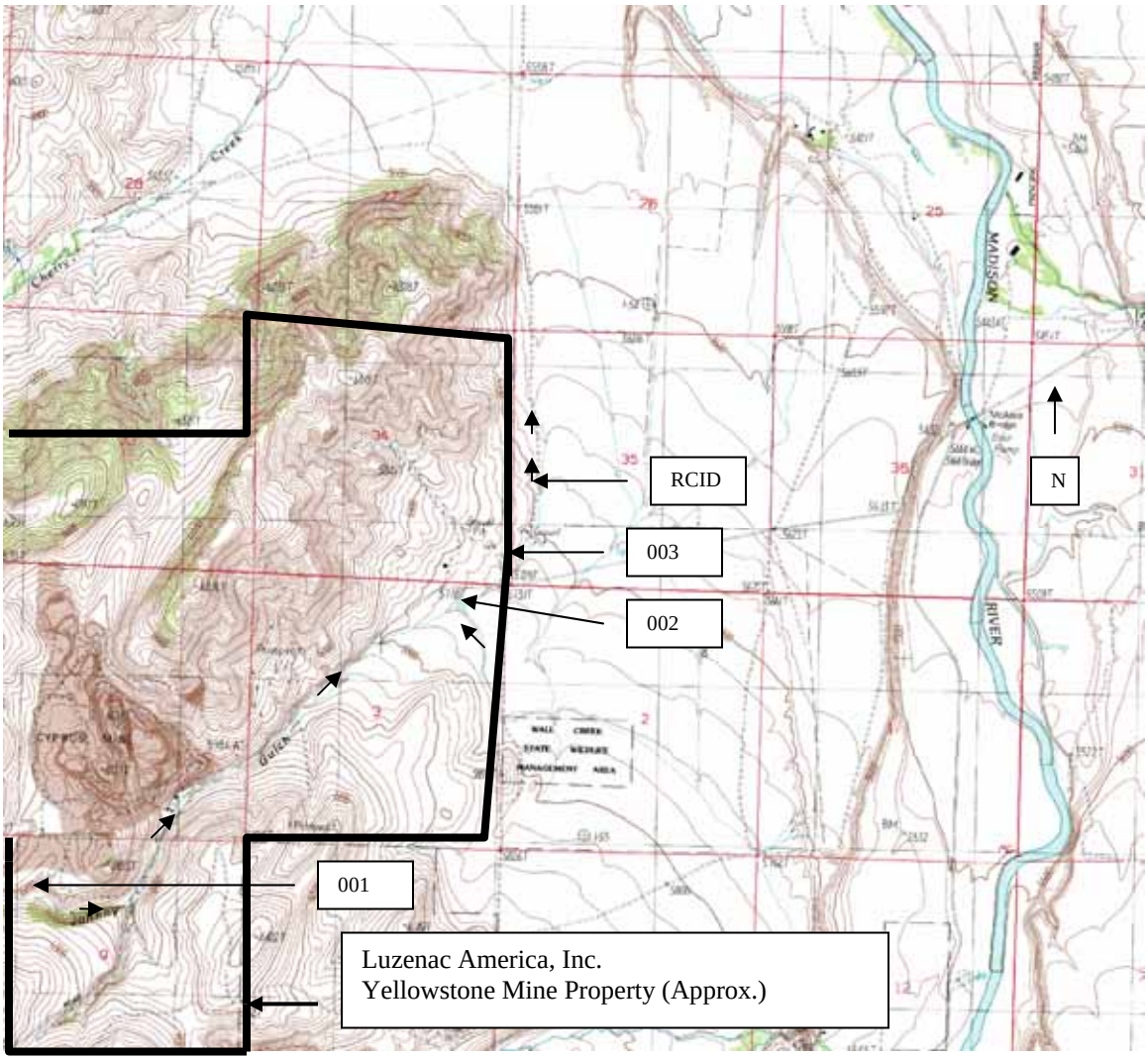
All other permit conditions and requirements will remain unchanged.

IX. Typographical Errors

A review of the current permit revealed several typographical errors, which are noted and will be corrected in the modified permit.

a. On pages 20 and 21, in four different places, the abbreviation "mg/L" for the written term "micrograms per liter" is incorrect. The correct abbreviation is "µg/L" and has been substituted..
b. The permit number on pages 14 through 17 is corrected to MT0028584 from MT28584; and
c. The permit number MT0028584 was included on pages 18 through 29, where it had been omitted.

OUTFALL LOCATION MAP
LUZENAC AMERICA, INC. YELLOWSTONE MINE



X. Information Sources

1) Federal Clean Water Act (CWA), 33 U.S.C. 1251, *et seq.*

2) Montana Water Quality Act, Montana Code Annotated 75-5-101, *et seq*.

3) Permit Application, Degradation Authorization, and Annual Fees, Administrative Rules of Montana (ARM) 17.30.201

4) Mixing Zones in Surface and Ground Water, ARM 17.30.5, *et seq*.

5) Montana Surface Water Quality Standards and Procedures, ARM 17.30.6, *et seq*.

6) Nondegradation of Water Quality, ARM 17.30.7, *et seq.*

7) Montana Pollutant Discharge Elimination System (MPDES), ARM 17.30.12-13, *et seq*.

8) Montana Department of Environmental Quality Circular DEQ-7, Montana Numeric Water Quality Standards, February 2008

9) US Code of Federal Regulations, 40 CFR Parts 122-125, 130-133, & 136

10) MPDES Permit Number MT-0028584, Issued on May 9, 2006

Prepared by: James F. Brown, January, 2009